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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/487,405	01/18/2000	Suman Preet Singh Khanuja	U-012567-2	3123

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EXAMINER

CHAKRABARTI, ARUN K

ART UNIT

PAPER NUMBER

1634

DATE MAILED: 04/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.  
**09/487,405**

Applicant(s)

**Khanuja**

Examiner

**Arun Chakrabarti**

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**1634**



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on Jan 7, 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 6-13 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 6-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☒ Other: Detailed Action

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## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 7, 2003 has been entered.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was

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made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 6-8 and 10-13 are rejected under 35 U.S. C. 103 (a) over Kumar et al. (U.S. Patent Plant 5,898,001) (April 27, 1999) in view of Jones et al. (Journal of Economic Entomology, (1979), Vol. 72, pages 628-632).

This rejection is based on the fact that any disease-free plants encompass the insect tolerant genotypes or clones.

Kumar et al teach a novel *in vitro* screening method for identifying disease-free plants (Abstract, Column 1, lines 30-35, and Column 9, lines 32-35, and Claim 26), the method comprising the steps of :

- a) growing plantlets in an *in vitro* system (Examples 1 and 3);
- b) screening the plantlets for molecular variation of somaclones of *Mentha arvensis* using RAPD analysis in vitro (Example 2 and Column 4, lines 21-26, and Column 8, Table 1);
- c) selecting the somaclones having molecular variation (Example 2);
- d) exposing the somaclones to different conditions (Examples 2, 3 and 4);
- e) identifying the surviving somaclones (Examples 3 and 4); and
- f) growing the surviving somaclones into adult *Mentha arvensis* plants (Examples 1 and 3, and Column 14, lines 19-22).

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Kumar et al teach a novel screening method wherein the clones could be generated vegetatively by tissue culture, glass house or in field by asexual reproduction method (Column 13, lines 1-5 and Examples 3 and 4).

Kumar et al do not teach exposing the somaclones to insect larvae or nymph to check for insect larval non-preference to produce the desired plant product of insect tolerance gene.

Jones et al. teach forced feeding of insects by releasing actively feeding third or fourth instar larvae or nymphs and checking for insect larval non-preference (Abstract, Tables 2 and 3 and Page 631, Column 2, second paragraph).

It would have been *prima facie* obvious to one having ordinary skill in the art at the time the invention was made to substitute and combine the forced feeding of insects by releasing actively feeding larvae or nymphs and checking for insect larval non-preference of Jones et al. with the novel method of induction and selection of somaclonal variation in plants of Kumar et al., since Jones et al. state, "The screening test results show that both insect non-preference and plant tolerance contribute to the resistance expressed among the soybean genotypes (Page 631, Column 2, second paragraph)". An ordinary practitioner would have been motivated to substitute and combine the forced feeding of insects by releasing actively feeding larvae or nymphs and checking for insect larval non-preference of Jones et al. with the novel method of induction and selection of somaclonal variation in plants of Kumar et al. in order to achieve express advantages, as noted by Jones et al., of the screening test results which show that both insect non-preference and plant tolerance contribute to the resistance expressed among the plant genotypes.

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4. Claim 9 is rejected under 35 U.S. C. 103 (a) over Kumar et al. (U.S. Patent Plant 5,898,001) (April 27, 1999) in view of Jones et al. (Journal of Economic Entomology, (1979), Vol. 72, pages 628-632) further in view of Prajapati et al. (Phytotherapy Research, (1998), Vol. 12, pages 270-274).

Kumar et al. in view of Jones et al. teach method of claims 6-8 and 10-13 as described above.

Kumar et al. in view of Jones et al. do not teach the insect larvae *Spilarctica obliqua*.

Prajapati et al teach the insect larvae *Spilarctica obliqua* (Abstract and Materials and Methods and Figure 1).

It would have been *prima facie* obvious to one having ordinary skill in the art at the time the invention was made to substitute and combine the insect larvae *Spilarctica obliqua* of Prajapati et al. with the novel method of induction and selection of somaclonal variation in plants of Kumar et al. in view of Jones et al., since Prajapati et al. state, "Five fractions from the root of the common periwinkle were evaluated for their antifeedant activity, growth regulatory potential, and effect on fecundity and fertility against various stages of a lepidopterous insect, *Spilarctica obliqua* (Abstract, first sentence)". An ordinary practitioner would have been motivated to substitute and combine the insect larvae *Spilarctica obliqua* of Prajapati et al. with the novel method of induction and selection of somaclonal variation in plants of Kumar et al. in view of Jones et al., in order to achieve express advantages of an insect larvae, as noted by Prajapati et al., which can provide the evaluation of a new hybrid plant for their antifeedant activity, growth regulatory potential, and

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effect on fecundity and fertility against various stages of a lepidopterous insect, *Spilarctica obliqua*.

***Response to Amendment***

5. In response to amendment, previous 103 (a) rejections based on Sondahl reference have been withdrawn. However, new 103(a) rejections based on Kumar et al reference have been included.

***Response to Arguments***

6. Applicant's arguments with respect to all pending claims have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arun Chakrabarti, Ph.D. whose telephone number is (703) 306-5818. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion, can be reached on (703) 308-1119. Any inquiry of a general nature or relating to the status of this application should be directed to the Group analyst Chantae Dessau whose telephone number is (703) 605-1237. Papers related to this application may be submitted to

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Technology Center 1600 by facsimile transmission via the P.T.O. Fax Center located In Crystal Mall 1. The CM1 Fax Center numbers for Technology Center 1600 are either (703) 305-3014 or (703) 308-4242. Please note that the faxing of such papers must conform with the Notice to Comply published In the Official Gazette, 1096 OG 30 (November 15, 1989).

Arun Chakrabarti

Patent Examiner

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April 2, 2003

  
**ARUNK. CHAKRABARTI**  
**PATENT EXAMINER**